



Lean Six Sigma

Department of the Navy International Programs Office

SAEC Update
25 Jan 2007

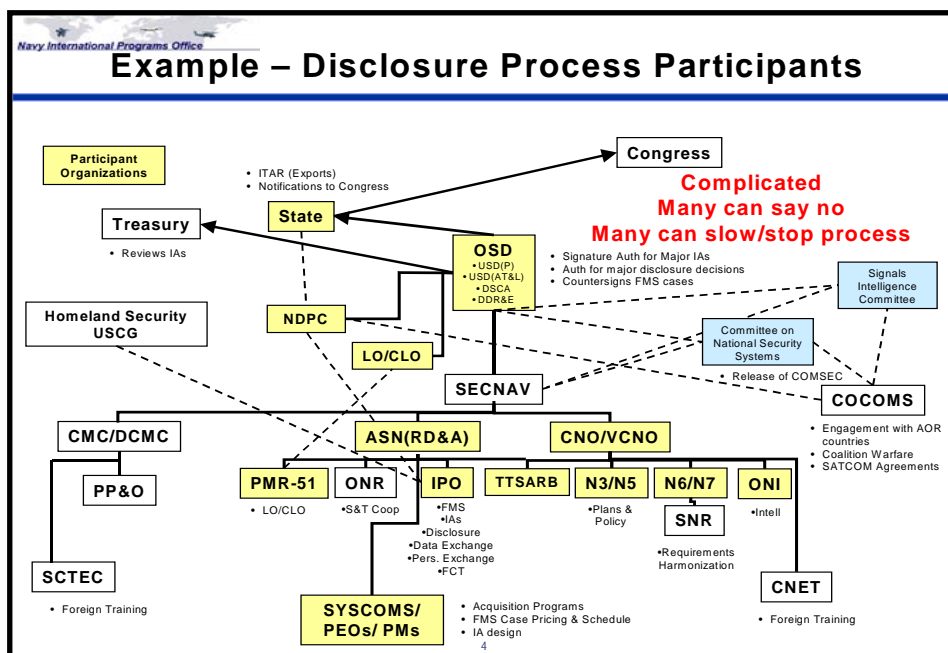
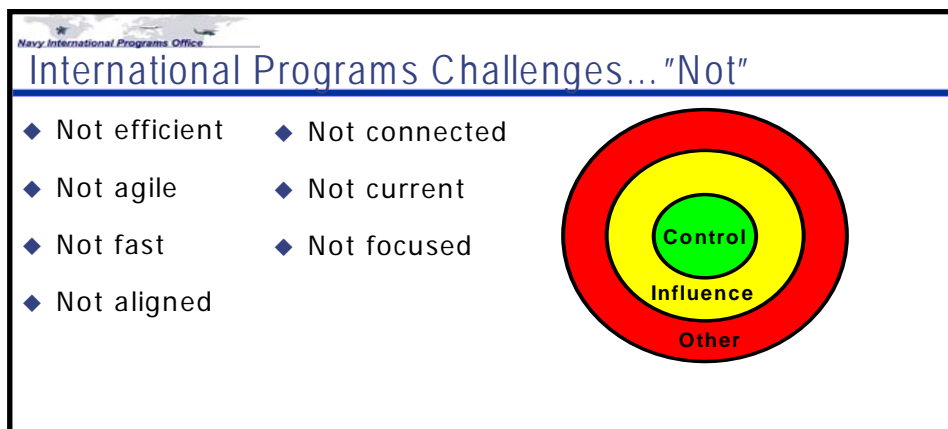
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The Security Cooperation Environment

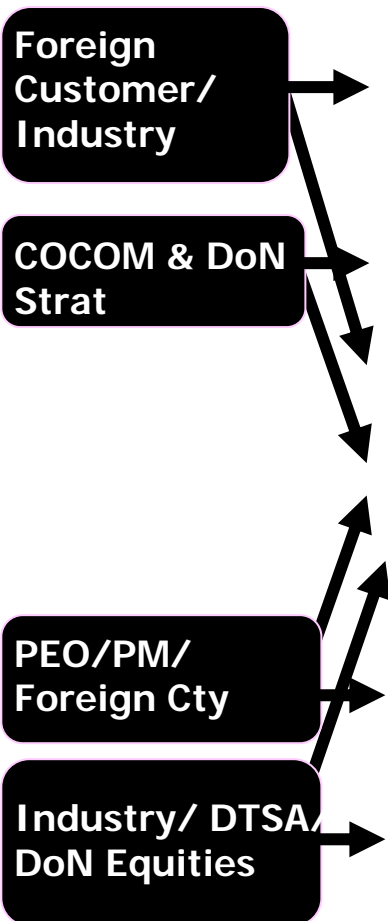
“Bureaucratically fragmented, awkward and slow, its administration is diffused over a haphazard and irrational structure covering at least four departments and several other agencies. The program is based on a series of legislative measures and administrative procedures conceived at different times and for different purposes, many of them now obsolete, inconsistent and unduly rigid and thus unsuited for our present needs and purposes...”

Text from President John F. Kennedy's Special Message to Congress, March 22, 1961, quoted by DEPSECDEF England in his remarks to the 6th Annual DSCA Security Cooperation Conference, March 27, 2006



Our Products and Demand Signals

Demand Signals

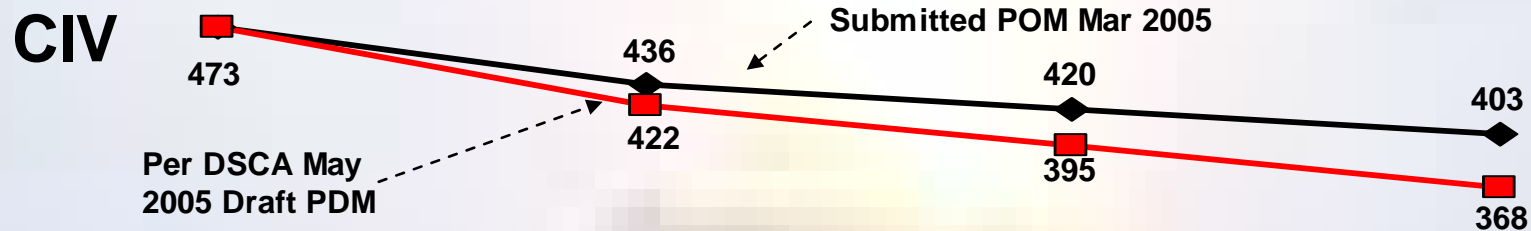


Products	Annual Output
Foreign Military Sales	6083 FMS Actions (Avg. of FY04-06) (222 P&As, 1101 LOAs, 3330 Active Cases, 1430 Cases Pending Closure)
Strategic Planning	11 Int'l Business Development Plans 448 International Opportunities
Disclosure Actions	636 Disclosure Actions (TTSARBs, ENDP, TPTs, CFIUS, Doc Discl, DDLs) 8500 Foreign visits 5000+ Other Disclosure Actions (email queries, phone calls, implementation questions, etc.)
Cooperative Programs	146 Cooperative Program Actions (51 IAs, 60 IEAs, 15 ESEPs, 20 FCTs)
Export License Reviews	6772 Export License Application Reviews and Exemptions

~ 500 Potential Demand Signal Sources

The “Burning Platform”

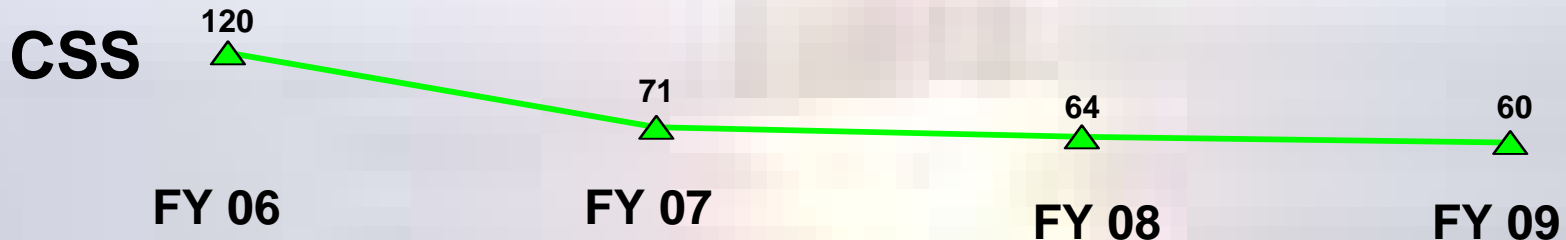
How do we increase mission effectiveness in a resource constrained environment?



70 Work Years Adjusted in POM Submission

FY 07 – 09 Draft PDM Reduces an additional 14 – 35 Work Years

(adjusted for inflation 3.5% per annum)

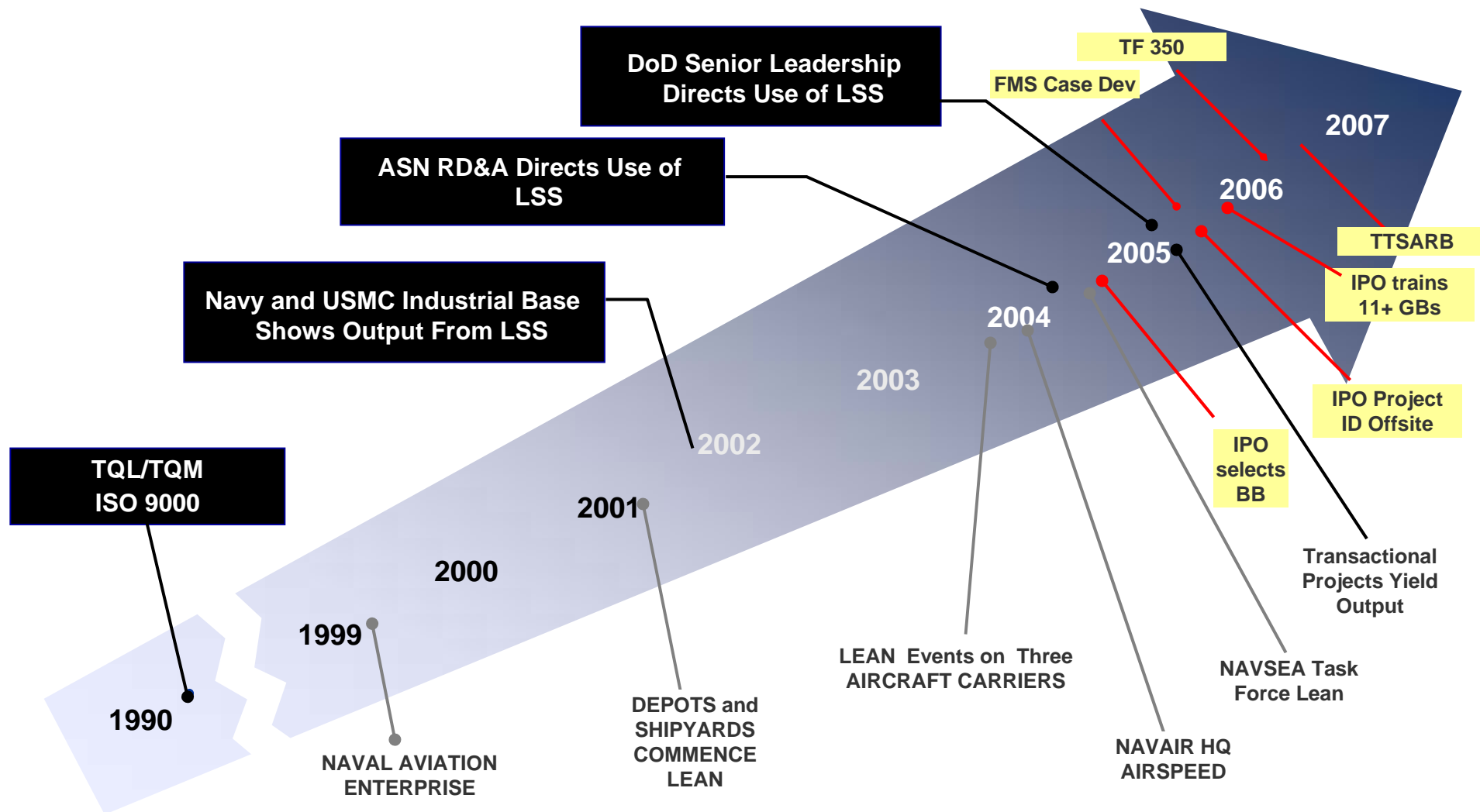


CIVPAY = 70% + CSS = 22.4%

CIVPAY + CSS = 92.4% of FY 06 budget

Labor and non-Labor acceleration (inflation) will range 3.4% - 4.9%

DoN Lean Six Sigma (LSS) Journey



Striving for: “LSS - Business as Usual”

6

How do we do more with less?

- ◆ More work but fewer or “flat” resources
- ◆ Outputs are in demand – FMS Sales increasing 16%
- ◆ We CAN complete our mission if we improve productivity
 - LEAN out processes to decrease cycle time
 - Value Stream Mapping
 - Apply Six Sigma tools (variation reduction) on remaining value added steps to improve quality
- ◆ Result
 - Improved cycle time to handle increased demand with same workforce
 - Cost reduction impacts on process are considered
 - Quality and consistency are improved

Lean Six Sigma is a productivity improvement methodology

Lean Six Sigma Goals

- ◆ Build a sustainable Lean Six Sigma capability and culture at NIPO
 - Capability
 - Train sufficient workforce personnel in Lean Six Sigma
 - Execute events & projects focused on high impact core value streams and quality of work life
 - Culture
 - Build Commitment, not just compliance
 - Focus on reducing “clerking” activities and adding value – improves quality of work
 - How much can we return and still accomplish the mission – it’s not “our” money
- ◆ Synchronize with Lean Six Sigma initiatives across the DoN and DoD that impact international programs
 - SYSCOMs (Task Force Lean, AirSpeed, NAVICP Business Enterprise Team) efforts
 - Liaise closely with DSCA, USD AT&L, DTRA, DFAS etc. for synergy with influence DoD transformation

▲ Consumption attitude ➡ Resource Mgmt Mindset

Apply cost savings & avoidance to meet unfunded requirements

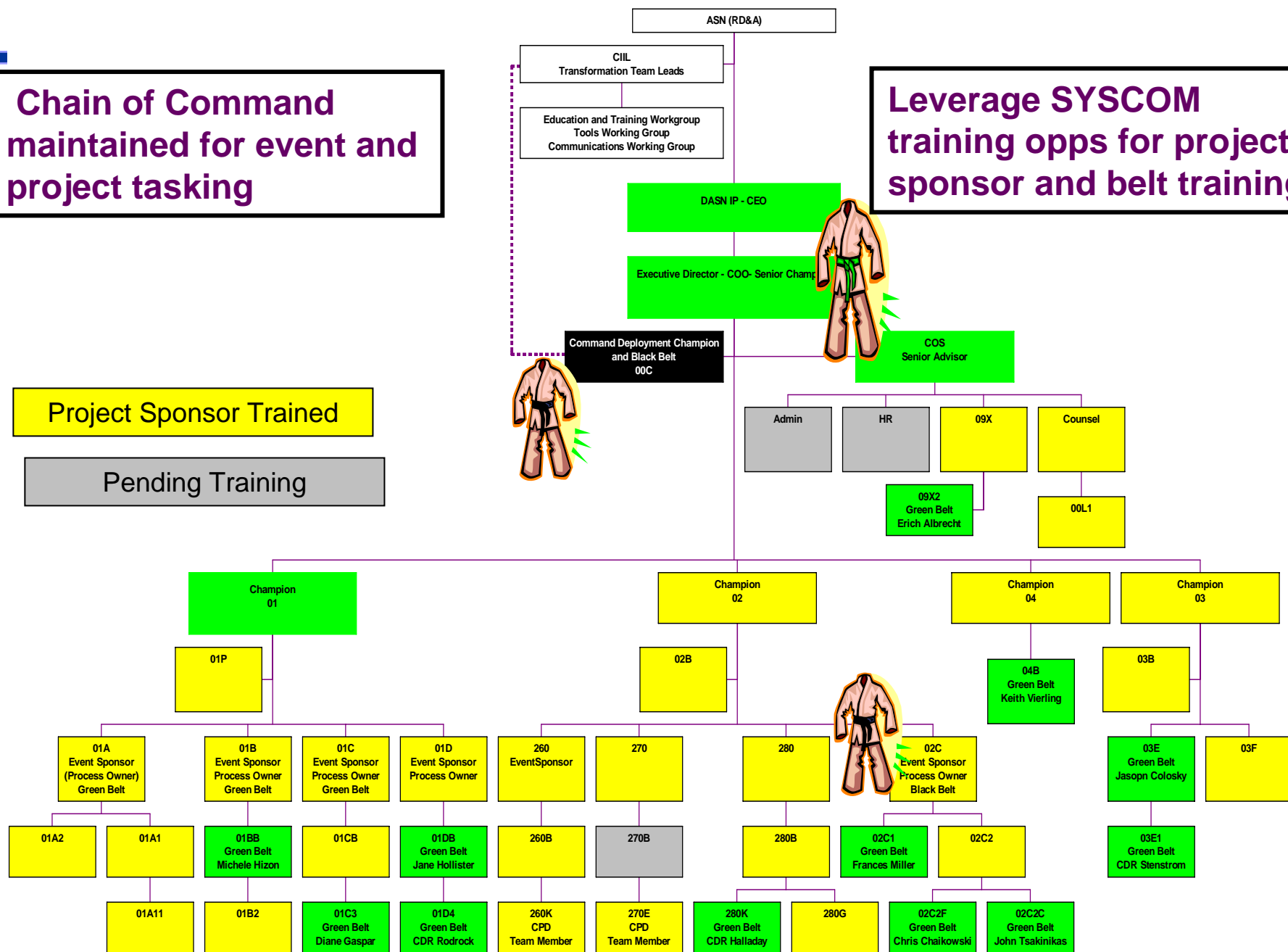
IPO LSS Organization and Training Status

Chain of Command maintained for event and project tasking

Leverage SYSCOM training opps for project sponsor and belt training

Project Sponsor Trained

Pending Training



International Programs Training Status

- ◆ 3 Black Belts with International Programs credentials trained – NAVAIR, NAVICP, NIPO – 2 ASQ certified
 - NAVICP and NIPO adding 1 black belt each
- ◆ ~ 21 green belts with Int'l program experience trained
 - IPO SESs (NAVSEA Task Force Lean)
 - Training resources (TF Lean, AirSpeed) are generally available to get other green belts and project sponsors trained
 - USCG attended NAVSEA GB course
 - 00 and COS received GB training at NAVAIR
 - Sponsoring various DSCA Personnel at Project Sponsor and Green Belt training within Beltway
 - Work force “Exposure” training ongoing
 - Online and Black Belt led once per quarter

Lean Six Sigma Events

Complete

FMS Case Development (\$0K/\$560K)

TTSARB Usefulness (quality)

TTSARB Reject Rate (\$0/\$64K)

IPO-01D (Disclosure) Workflow (cycle time)

Export License Process (\$142K/\$245K)

Foreign Visit Requests (\$101K/\$155K)

Metrics (na)

ADP Support (na)

In-Process

FMS Resource Allocation (quality)

Case Reconciliation Review (\$0/\$1,000K)

Pre-LOR process (quality)

Cooperative Programs process (cycle time)

Information Exchange Program process (cycle time)

DAC- FCT Programs Optimization (\$700K/\$0)

Pending

FMS Training of Foreign Nationals

Case Execution -- Status Tracking

Other Disclosure Issues (FVR, Doc, Training Disclosure)

Outreach Processes

Strategic Business Development

Command Briefing Process

Savings
(Type I/Type II or III)

International Programs Projects Status

- ◆ **NAVSEA & related PEOs**
 - SEA 63 - FMS Case Development Lean event
 - PEO SUBS – Case Development cycle time
 - PEO IWS - FMS deliveries
- ◆ **NAVICP – NAVSUP Wide Lean Six Sigma Implementation underway**
 - FMS Case Direction
 - Case Reconciliation Review Streamlining
 - Controlled Exceptions reduction
 - Several FMS-related requisitioning process projects
- ◆ **NAVAIR (1.4) - Airspeed project on Releasability in PMA-265 (FA-18) completed and savings validated**
 - Case Development Cycle Time - underway
 - FMS Repair of Repairables pricing - launch Feb '07
 - FMS travel- launch TBD

Int'l Programs Lean Six Sigma (LSS) Goals

- ◆ Plan and execute Continuous Process Improvement initiatives using LSS tools to mitigate funding shortfalls and improve process response times to customers and stakeholders
 - train and educate workforce – 100% exposure, 1% BB, 5% GB, all sups, mgrs, GS-15, 06 Proj Sponsor trained
 - select and work 3 projects continuously
 - Value Stream Map all processes, 1/month minimum, preferably as part of a project or an event
 - dovetail with ASN RDA LSS implementation plan
- ◆ Synchronize projects across the Security Cooperation processes to replicate successes
 - collaborate on projects with DoD and other Military Departments stakeholders in Security Cooperation processes

Status

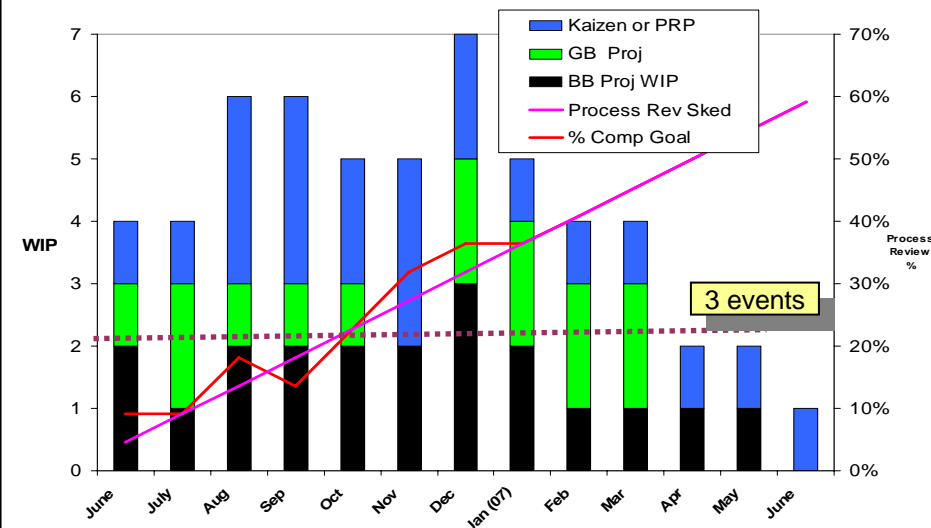


- ◆ Training
 - IPO sponsored - DSCA Proj Sponsor Tng @ WNY 12 – 13 Dec
 - Week 2 BB Training, 8-12 Jan 07 @ PAX River
 - Working GB quotas (4) for other IPO Personnel – need charters
- ◆ Sharing
 - Transformation Team Leader Mtg 12/20
 - Met with DSCA GB and McKinsey consultant in support of Case Development staffing study
 - USASAC Conference Jan 2007
- ◆ Improving
 - Black Belt Projects**
 - Completed FCT – IOB Project L 20 Sept,
 - FMS Admin Resource Allocation Method – (L 7/18, D 8/8, Develop TG 10/11/06, next team mtg 12 Jan 07)
 - Case Reconciliation Review Process (L, 12/11)
 - Green Belt**
 - Completed USCG Financial Process Mapping
 - CMD Briefings (00B)
 - Process Reviews**
 - IA/Coop Prgms - VSM comp 7/27, 11/ 14 MP3 draft completed
 - ADP Support – Completed – 5 websites nominated for deletion
 - Info Exchanges (DEAs) – Completed
 - Metrics – part of EXCOMM tasker – completed 9/27

Implementation Metrics

Measure	Goal	Score
Project Status (G= tollgates w/in 1 week of sked, Y = tollgate>1 week of sked, R=>2 weeks)	3 proj or events meeting tollgate	G
Process Reviews completed (G = on schedule, Y = behind schedule, R = Unable to conduct)	Per Schedule	Y
Sups, Mgrs, NH-IV (PB-3) or 06-PS Trained Rate (G = 99%, Y = > 90%, R = < 90%)	100%	98%
All hands trained rate (G=>95%,Y =>80%,R=<75)	100%	98%
Belt Use Rate (G=>90%,Y=>50%,R=<50%)	100%	84%
Project Participation rate	Upward trend	+6% - 30%
PS Engagement Rate	Upward trend	+4% - 30%

Projects Tracker



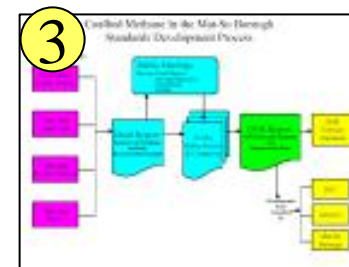
Process Reviews – Continuous Improvement Tool



Green Belt interviews Process Owner and participants about the process, determines data needs and problem areas



Belt assists in capturing data if reqd



Belt develops SIPOC, process map and leads value stream mapping session

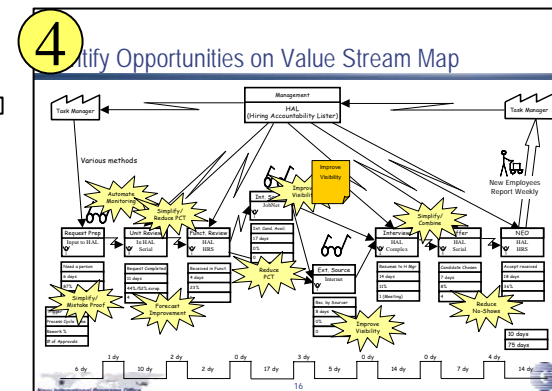


Obtain 00 & 09 approval on the MP3 plan sequence of quick wins, events or a project

**5 Multi-Phase Process Plan (MP³) Example
FMS Case Life Cycle Management**

Phases	I (FY 05 - 06)	II (FY 06 - 07)	III (FY 08 - 09)
Objective	<ul style="list-style-type: none"> Reduce 20 FMS Admin funded WYs in case dev and case exec processes Improve defined order case dev cycle time in 90% of cases within customer need date Improve line item delivery to 100% on time 	<ul style="list-style-type: none"> Reduce 20 FMS Admin funded WYs in pre-LOR and case closure Reduce the number of open over 2 yrs but supply complete FMS cases by 50% Align pre-LOR activities and processes to the Strategic Business Development Plan and EOP 	<ul style="list-style-type: none"> Align or reduce FMS Case lifecycle management with similar reductions (30-40%) in life-span of cases or line items from identification of need to delivery to closure Benefits of FMS recognized by DoN/USC/USMC Acquisition community
Process Focus	<ul style="list-style-type: none"> Standardize and remove duplication in case development processes for defined order cases across all systems commands Leverage Reliability, Disclosure and Lean Case Dev events Standardize the case execution process across all systems commands - remove duplication and non-value added activities 	<ul style="list-style-type: none"> Improve and standardize the Pre-Letter of Request process to ensure synchronization with the Strategic Bus Development plan Measure activity levels (costs and full time equivalents) of pre-LOR work by country and system Integrate the Case Closure process into the Case Execution process 	<ul style="list-style-type: none"> TBD
Info Technology Impacts/ Other	<ul style="list-style-type: none"> Incorporate necessary changes into Defense Security Assistance Management Systems (DSAMS) and the Case Execution Performance tool Assess ERP deployment impacts 	<ul style="list-style-type: none"> Centralized "Dashboard" for continuous monitoring of key FMS business measures in Pre-LOR, Case Development, Closure and Execution Leverage existing IT systems to improve customer communication 	<ul style="list-style-type: none"> TBD

Process Owner drafts MP3 to show process improvement goals and actions in time order and belt assignment



Identify process problems & improvement opportunities



Key outputs = Value Stream Map and the Multiphase Process Plan

Process Reviews Schedule

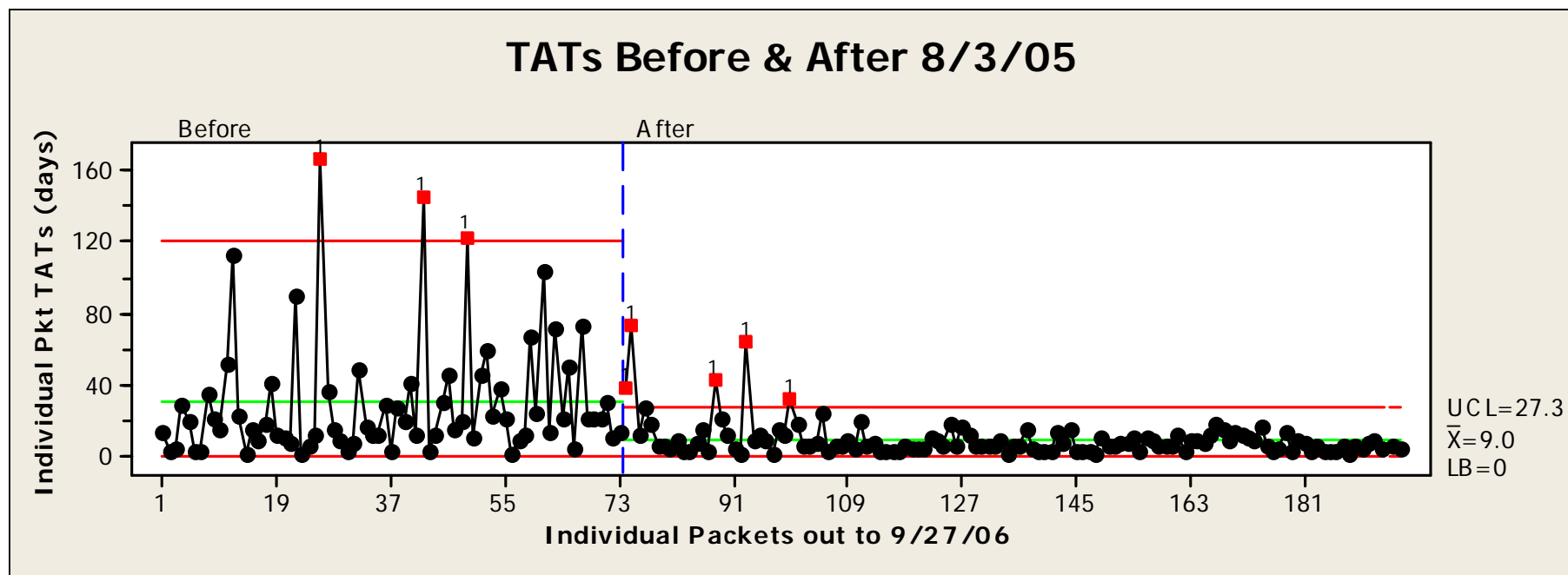
Process	Owner	Sked	Belt	Comment
Case Reconciliation Review	02	Aug 06	Bowdren/Chaikows	BB Proj
International Agreements & Cooperative Programs	01	Jul 06	Bowdren	Kaizen
Provide ADP Support	04	Aug 06	Albrecht	
Info Exchanges (DEAs)	01	Aug 06	Hizon	Green Belt Proj
Foreign Comparative Testing	01	Sep 06	Rodrock	Green Belt Proj
Pre-LOR process	02	Oct 06	Halladay	Related to Strat Biz Dev
POM and Budget allocation	04	Jul 06	Bowdren / Vierling	BB Proj
Other Disclosure Issues (FVR, Doc, Tng Reviews)	01	Sept 06	Hizon	
Develop/Gather/Track/Analyze Reports and metrics	COS	Sept 06	Bowdren	ASN RDA Action 5
Prpre/prvide info products for use by higher authority	COS	Oct 06	TBD	
Provide secretarial support	COS	Nov 06	Hizon	
Outreach Processes – Newsletter, NIID, Co Day	03	Dec 06	Stenstrom	
International Training	02	Jan 07	Tsakinikas	May work USCG proj
Case Execution – status tracking	02	Feb 07	Chaikowski	02 MP3
Strategic Business Development	03	Mar 07	Colosky	
Legal Review	00L	Apr 07	Chaikowski	Per OOL plan
Training and Indoc	COS	May 07	Hollister	
Ship Transfers	03	Jun 07	Colosky	
Case Closure	02	Jul 07	Chaikowski	
Engineer and Scientist Exchange Program	01	Aug 07	Hizon	
Drawdown	02	Sep 07	Tsakinikas	
Personal Exchange Program	01	Oct 07	Hizon	
EDA Transfers	03	Nov 07	Colosky	



Lean Six Sigma

Project Examples

Controlled Unclassified Releasability Cycle Time



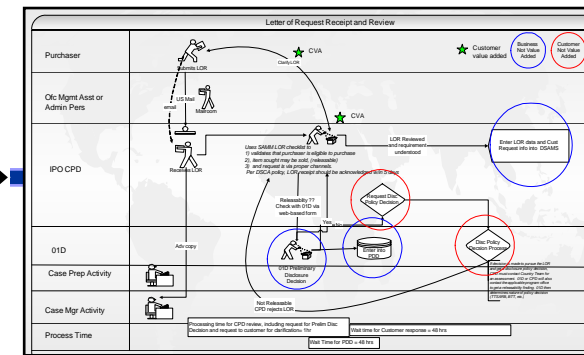
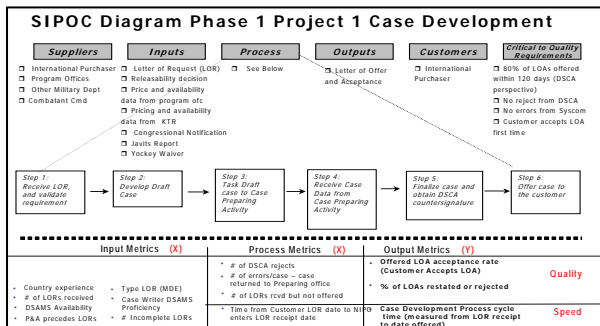
Control chart showing the process before and after 8/3/05
 ("after" data is from 8/3/05 to 9/27/06)

POC – Mr. Shane DeNinno – NAVAIR 1.4
 Shane.deninno@navy.mil

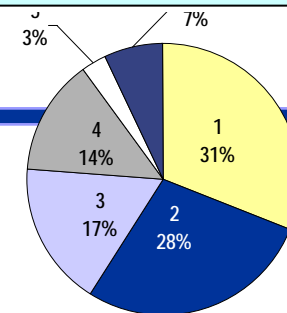
Speed - Reduce LOR - LOA cycle time to **90 days**

Quality - Reduce the internal error rate to **0**, reduce the DSCA reject rate from **7.6% to 2.0%** and maintain first-time acceptance rate at **92%**

Cost - Reduce the cost by **~\$580K/yr**

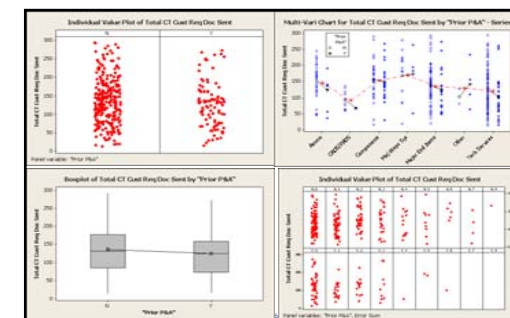


www.blackbeltsurvey.com

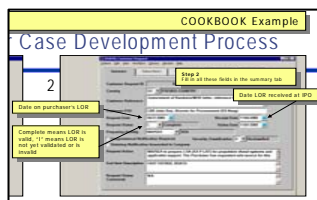
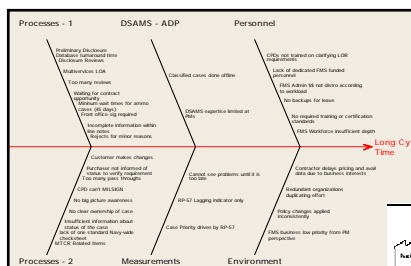
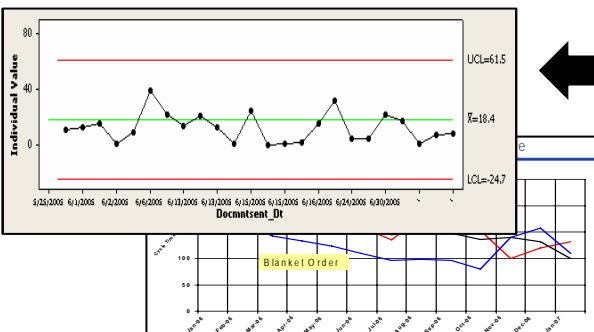


"As Is" Value Analysis and Quality Summary

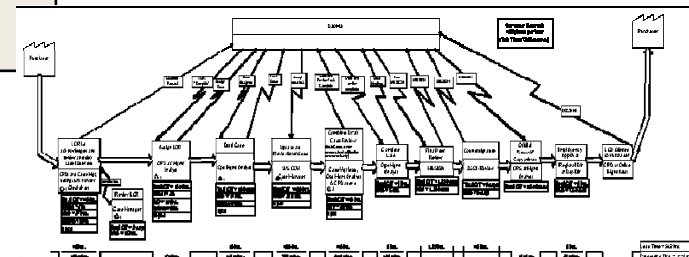
Process Step	1	2	3	4	5	6	7
Description	Receive LOR and CPD clarity	CPD data Entry (LOR Receipt) to Case Prep	Case Assigned to Case Prep Office & returned to IPO	Review Case - MLAP	MLAP to MSLG	Obtain DSCA Counter sign	Offer LOA
Performing Activity	IPO CPD	IPO Case Developer	Program Office or Case Mgr	IPO Case Developer	IPO Case Developer and CPD	DSCA	IPO CPD
Avg Cycle Time (days)	7	19	75	18	4	6	3
Customer Value Add Time (24 hr day)	.04	.25	.7	0	0	0	.02
Business Value Added Time (24 hr day)	2	.5	.3	.12	.54	.5	.02
Non Value Added Time (days)	4.96	18.25	74	17.88	3.46	5.5	2.96
Throughput = -13 Defined Order LOAs sent to purchaser/month Work in Process = -62 Defined Order LORs received but not yet offered as LOAs							



Project Sponsor – Navy IPO 02
Black Belt – Steve Bowdren, Navy IPO
Case Development Manager – Frances Miller
Case Development Jr. Mgmt Analyst – Karla Ellis
Country Program Directors – Joel Gatewood, Joe Stone
Business Financial Manager – Keith Vierling
Selected Case Managers and Case Admin Office



- Excessive Reviews
- Offline Processing
- Redundant Activities
- Obtain Pricing data
- Policy and Process
- Variation in LOR Review



Speed – Reduce cycle time to **92 days max**

Quality – Eliminate internal errors, data pending on DSCA reject and purchaser first-time acceptance rate

Cost - Reduce the cost (type 2 savings) by **~\$1.062m/yr**

Collaborate in Reviews,
Parallel vice Serial

Series	Total as is	Total to be	As Is LOR Review	To Be LOR Review	As Is Draft Case	To Be Draft Case	As Is Provide LOA Data	To Be Provide LOA data
Sigs (124) "G" or "F"	107	60					62	45
Major End Items (90) "L"	121	76					76	66
Components (57) "B" and "C"	132	87	7	5	19	2	87	85
Ammo (43) "A"	137	92					92	76

TF 350-1 PEO Late Endorsement of TTTSARB

Customer– Program Offices, Industry, Foreign Countries, DSCA, PEOs, DoN

Business Problem & Impact

During the Technology Transfer Security Assistance Review Board (TTTSARB) voting process, 91% of TTTSARBs are delayed. The current process takes an average of **6.5 (45.5 days)** weeks to obtain electronic votes for a request for disclosure. This delay impacts timely development of DoN disclosure policy

Measured & Analyze the Process

Data Collection: TTTSARB Voting System cycle time stratified by PEO and Country. Swim lane.

Root Causes: No SOP for AO to determine “real” requests, no standard format for requesting a disclosure position (Green Belt project), PEO does not endorse PM requests prior to submitting to IPO, voters have no sense of urgency, IPO reluctant to execute escalation plan

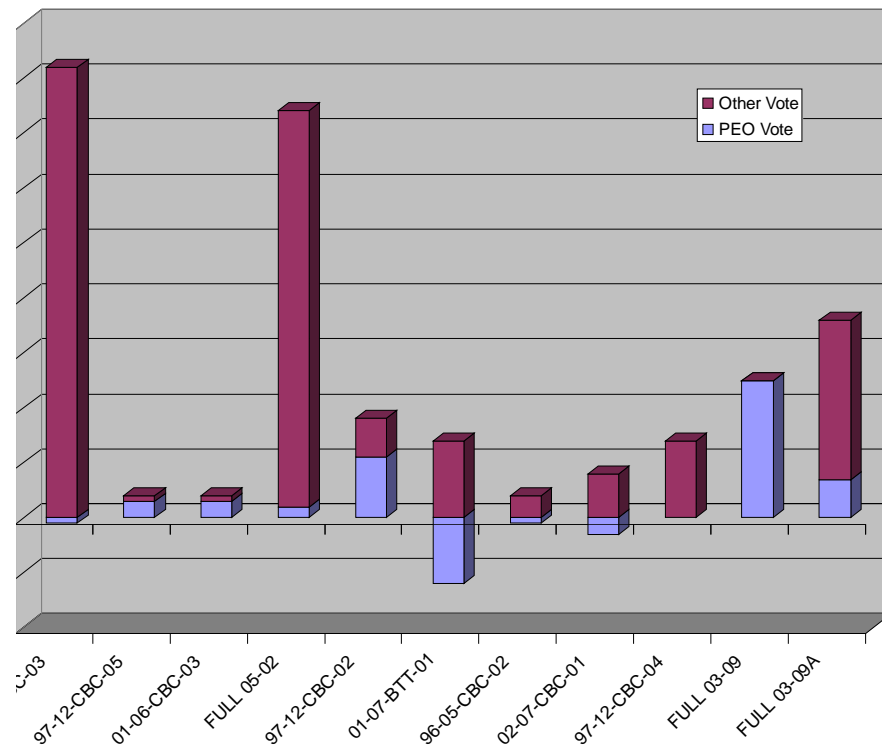
Developed Improvements & Control Plan

Require PEO endorsement of any program office request, ensure all disclosure requesters obtain local FDO chop before initiation, 01D/01DB clear all requests to start work, provide monthly synopsis of actions completed & in work & flag delinquent trends, adjust voting deadlines for FULL/CBC/BTT based on actual need date

Results/Benefits

When the solutions are implemented, expect Type 2 savings of \$64K based on cost avoidance of chasing late cases

PEO Contribution to Days Late (PEO("X"))



PEO	# ACTIONS	# VOTES LATE	% ACTIONS LATE	AVG DAYS LATE
PEO (1)	11	6	54.5%	8.5
PEO(2)	10	3	30%	59.33
PEO(3)	15	4	26.6%	22.25
PEO(4)	6	4	66%	27.5
PEO(5)	16	8	50%	36.5

Type 2 process cost reductions of ~\$64K

TF 350-2 Decrease Export License Cycle Time

Customer— Defense Technology Security Agency

Business Problem & Impact

Navy positions on export licenses for munitions and dual use technology are exceeding the desired turnaround time and resulting in “guillotined” cases or late submissions, causing delays in execution of various programs and systems

Measured & Analyze the Process

Data Collection: Manual Data Log of export license cases received and processed, used representative data from USXPORTS system as well. Value Streamed.

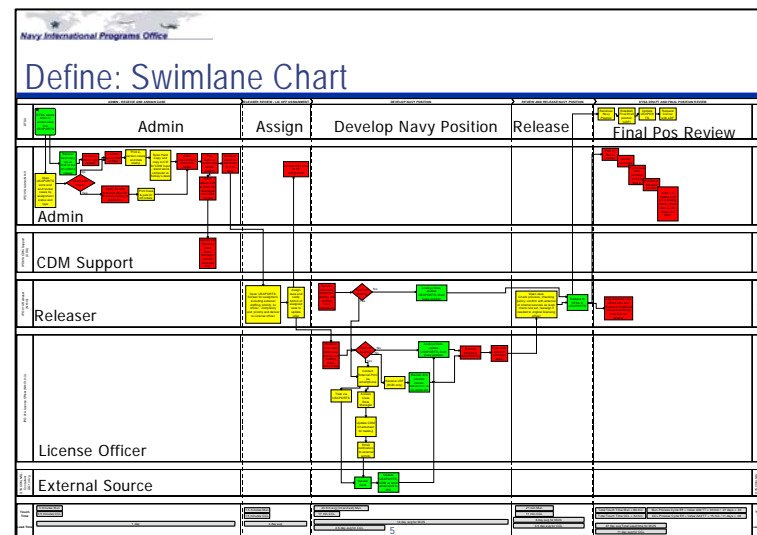
Root Causes: Wait time excessive due to feeding redundant databases, no Std Operating guide, only limited auto-staffing of munitions licenses, Navy seeing too many cases that don't have DoN equity

Developed Improvements & Control Plan

Sunset one database, Develop Navy-equity rule set, Change assignment process to pull vice push, conduct review collaboratively vice individually, Draft Std Op Guide, Establish process controls (WIP CAP and backlog tracking), HR plan

Results/Benefits

When the solutions are implemented, anticipate Type 1 savings of \$142K and Type 2&3 savings of \$245K based on changing the assignment process, sun-setting a database and reducing Band 4 touch time in reviews. Will also result in fewer guillotined cases.



Step 1:

LO & Admin.
Receive &
~~Assign Cases~~

~~Step 2: Releaser
review & Lic.
Officer
Assignment~~

**“To Be”
Process Flow**

~~Step 3:
LO & RO
Develop &
Release
Position~~

**Step 4:
LO & RO
Review and
Release
Position**

**Step 5:
DTSA Draft
& Final
Review**

Type 1 process cost reductions = ~\$142K
Type 2&3 process cost reductions= ~\$245K

TF 350-3 Decrease Foreign Visit Req Cycle Time

Customer— Visitors and Embassies

Business Problem & Impact

Improving internal Foreign Visit Request (FVR) processes could result in efficiencies that would allow for the reallocation of analyst resources (one staff-year) to other mission-critical functions

Measured & Analyze the Process

Data Collection: FVR system data, value stream and swim lane

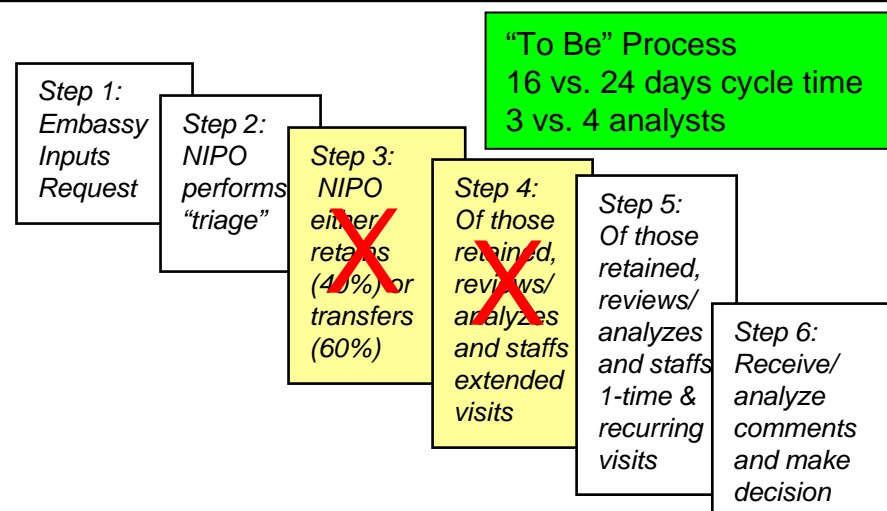
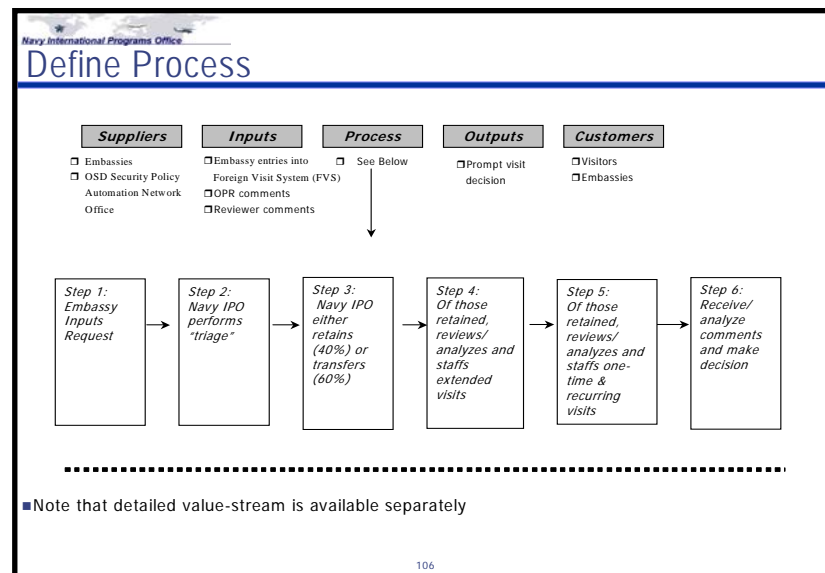
Root Causes: poor input by Embassies, FVS tool not error proofed or able to auto-staff to office or primary responsibility, lack of knowledge of technologies, interruptions in workflow, error in response from “staffed-to” offices (missing data, no response, RWA, etc.)

Developed Improvements & Control Plan

Request OSD require error-free submissions from Embassies and implement error proofing to the largest extent possible, Request OSD proceed with efforts underway to directly staff to Offices of Primary Responsibility (OPRs) rather than sending the cases through NIPO, consolidate extended visits and other visits into one process

Results/Benefits

When the solutions are implemented, anticipate Type 1 savings of \$101K and Type 2&3 savings of \$155K based on eliminating 2 steps for “to be” process and standardizing work.



Type 1 process cost reductions = ~\$101K
Type 2/3 process cost reductions = ~\$155K